CLAIMS

1. 1. An apparatus for facilitating reliable storage of a file,
2. comprising:
3. a file processor for converting the file into N storage
4. segments that enable reassembly of the file from a
5. subset of any M of the storage segments, where N and M
6. are positive integers, and

7. $$N > M \geq 1; \text{ and}$$

8. means facilitating storage of at least M of the N storage
9. segments.

1. 2. The apparatus of claim 1 wherein the means facilitating
2. storage is a storage segment transmitter that transmits
3. at least M storage segments toward one or more storage
4. devices.

1. 3. The apparatus of claim 2 further comprising a storage
2. segment retriever that requests the at least M storage
3. segments from the one or more storage devices, and a file
4. reassembler that reassembles the file after receiving as
5. few as M of the N storage segments.

1. 4. The apparatus of claim 2 wherein the storage segment
2. transmitter transmits each one of the N storage segments
3. to one of N geographically distributed storage devices.

1. 5. A method of facilitating reliable storage of a file,
2. comprising the steps of:

3. converting the file into N storage segments that enable
4. reassembly of the file from a subset of any M of the
5. storage segments, where N and M are positive integers,
6. and

7. $$N > M \geq 1; \text{ and}$$

8. storing at least M of the N storage segments.

1 6. The method of claim 5 further comprising the steps of
2   retrieving at least M of the N storage segments and
3   reassembling the file from the retrieved storage
4   segments.

1 7. The method of claim 6 wherein the step of storing
2   comprises transmitting at least M storage segments toward
3   one or more storage devices, and the step of retrieving
4   comprises transmitting a request for storage segments of
5   the file to the one or more storage devices.

1 8. The method of claim 7 wherein the step of transmitting at
2   least M storage segments comprises transmitting the N
3   storage segments to N storage devices.

1 9. The method of claim 7 wherein the step of transmitting at
2   least M storage segments comprises transmitting the N
3   storage segments to N geographically distributed storage
4   devices.

1 10.   The method of claim 6 wherein the step of storing
2   comprises transmitting at least M storage segments to one
3   or more storage devices of a plurality of network
4   devices, and the step of retrieving comprises
5   transmitting to a server a request for storage segments
6   of the file, wherein the server posts messages to the one
7   or more storage devices requesting the one or more
8   storage devices to transmit storage segments of the file
9   to a requester.

1 11.   The method of claim 10 further comprising the step of
2   storing, at the server, identity information about the
3   plurality of network devices to impede an intruder from
4   learning the identity information about the plurality of
5   storage devices.

1 12.   The method of claim 10 further comprising the step of

2   storing, at the server, identity information about the

3   one or more storage devices storing the at least M

4   storage segments to impede an intruder from learning the

5   identity information about the one or more storage

6   devices.

1   13.   The method of claim 5 further comprising the step of

2   causing conversion of at least one of the M storage

3   segments into N_2 storage segments that enable reassembly

4   of the at least one storage segment from a subset of any

5   M_2 of the N_2 message segments, where N_2 and M_2 are

6   positive integers and $N_2 > M_2 \geq 1$; and wherein the step of

7   storing at least M of the N storage segments comprises

8   storing at least M_2 of the N_2 message segments.

1   14.   The method of claim 13 wherein the step of causing

2   conversion of at least one of the M storage segments

3   comprises causing conversion by a node, and wherein the

4   step of storing further comprises: transmitting the at

5   least one of the M storage segments to the node; and

6   causing the node to transmit the at least M_2 storage

7   segments to one or more storage devices.

1   15.   The method of claim 14 further comprising the steps of:

2   causing retrieval of at least M_2 of the N_2 storage

3   segments; and reassembling the at least one of the M

4   storage segments before reassembling the file from at

5   least M of the N storage segments.

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